Wave

TA indoor

A life in motion!

TA SERVICE

Art.nr: 95162

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Warnings.

Read the instructions carefully. It contains important warnings and instructions.

Do not reach into or under the chair when the seat lift and seat tilt is activated, because there is a risk of entrapment between the mechanical parts.

Be aware of others, especially children, is too close to the chair when the seat lift and seat tilt is activated.

TA Indoor Wave is not intended for users with a weight exceeding 120 kg

TA Indoor Wave should always be turned off when making entry and exit of the chair and when assisted by a helper, so that the chair does not accidentally run if the joystick is activated.

The chair is EMC tested. However, it is possible that the wheelchair can be affected by electromagnetic fields from mobile phones for example. Similarly, it cannot be excluded that the chair can emit electromagnetic fields that can affect the surroundings, such as alarm systems in stores.

Pay particular attention to late run when driving on ramps.

When the chair's brakes are disengaged, the chair may roll if it is on a sloping surface.

Slowing down by pressing the On /Off button there is a risk that the user's torso could fall over. Ultimately, the user could fall out of the chair.
This kind of slowdown should to the fullest extent be avoided on sloping surfaces and ramps.

By forcing level differences, it is important that the chair runs perpendicular to the obstacle in order to minimize the risk that the chair should tilt.

By forcing level differences with the seat tilted or hoisted there is a risk that the chair can tip over. By forcing level differences, it is therefore important that the seat is elevated as little as possible and is as close to an upright position as possible to minimize this risk.

Driving on slopes should be avoided because a slope to the site will give a risk that the chair can tip over.
When driving on slopes, seat should not be lifted to keep the chair's stability.

Avoid touching leaky batteries, as the contents can be harmful.

Repairs must be performed by TA Service A/S or repairer who is authorized by TA Service A/S. Only original parts or parts that are approved by TA Service A/S can be used.

Preface.

TA Services A/S hope you are satisfied with your new TA Indoor Wave.
TA Indoor Wave is designed to facilitate your daily movement indoors and outdoors close to your home. It has been very important to design the chair as small and compact as possible, without reducing the chair's stability and handling.

WARNING!
Read the instructions carefully. It contains important warnings and instructions.

Operating the wheelchair has been attempted designed simple, but it is nevertheless important that you read through this manual, so you're sure to get the most out of your TA Indoor Wave.
Keep this manual you can later use it as reference.

In this manual you will find the information you need to operate the wheelchair. If you have questions, comments, or suggestions, please feel free to contact us:

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TA Service A/S makes continuous product development and we reserve the right to make changes.

CE

TA Indoor Wave is tested by Hjälpmedelsinstitutet in Stockholm, and complies with standard EN 12184:1999.
TA Indoor Wave is EMC tested by the accredited test lab Delta following standards EN 12184:2002 and DS / ISO 7176-21:2003.
TA Indoor Wave is Climate tested by Delta in accordance to ISO 7176-09.

TA Indoor Wave is Crash tested by Dahl Engineering in accordance to ISO 10542-5 &7176-19 – 2008.

This handbook has been prepared in accordance with applicable requirements.

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Technical Data

Wheelchair Type:	Class A: Wheelchairs mainly intended for indoor use and are not necessarily doing outdoor hurdles.
Dimensions:	Width excl. seat: 56 cm Length excl. footplate / foot supports: 69.5 cm Length incl. Standard footplate: 88.5 cm Diagonal excl. Standard footplate: 90 cm Diagonal inc. Standard footplate: 105.5 cm Floor clearance (measured engine part): 7cm Space requirements at turning (chair without Standard footplate): 90 cm Seat lift: 30 cm. Seat tilt: 34 ° (about -3° to +31 °) Seat Mounting Height: 40 cm. The chair's weight with seat: approx. 102 kg depending on configuration
User Weight:	Maximum user weight: 120 kg
Tires:	Solid tires front and rear. Tire sizes, rear: 200 x 5 Tire sizes, front: 300 x 5
Temperature:	Storage Temperature: -20° C to 50° C Operation Temperature: -20° C to 50° C
Batteries:	2 pcs. 12V/35Ah Type: gas-tight lead acid (Rekombinationsbattery). Capacity: 34 Ah Maximum charge current: 5 Ah Battery Connection Type: Bolt, 5 mm Size: • Width: 13 cm • Length: 19.5 cm • Height incl. poles: 17 cm
Engines:	2 pcs. 24V/450 Watt
Driving Data:	Maximum driving distance (theoretical): 15 km Maximum climbing ability over short distances (theoretically): 12 ° Maximum climbing ability over long distances: 10 ° Maximum speed, forward driving: 6 km / h Maximum speed, revers driving: 3 km / h Clearance from floor: 7cm Maximum level difference that can be forced: Forward without run-up: 3 cm Forward with run-up: 4 cm Backwards without run-up: 4 cm Reverse with run-up: 5 cm

Charger Specifications:	See user's guide included charger - Aura 24V / 5 A.
Electronics:	Penny and Giles R-Net Drive Control
Brakes:	Motor Brake and Electric Brake. Motor brake acts as brake-lock brakes, and is activated when the control stick is released. From you release the control stick and until the chair stands still there is a small “late run” on the chair. This “late run” can be adjusted depending on whether you want a soft or a sharp slowdown. It is possible to set how fast the chair's slowdown will be. If this change is wanted please contact TA Service A/S. Electromagnetic brake is activated when the chair is stationary and serves as a "parking" brake.

Operating Instructions.

Before driving:
WARNING!
TA Indoor Wave is not intended for users with a weight exceeding 120 kg

WARNING!
TA Indoor Wave should be turned off when making entry and exit of the chair and when assisted by a helper, so that the chair does not accidentally run if the joystick is activated.

Footplate / foot rests can usefully be looked up to facilitate the entry and exit.

Before you use TA Indoor Wave, check the following:

- The chair's **speed** is sufficiently low.

- Any **footrests** are properly mounted and locked so they do not swing out while driving.

- The **seat lift** is set at the lowest possible level and the **seat tilt** is as close to horizontal (neutral) position as possible.

NB!
When the seat is raised above 8 cm, the seat can tilt max 8 °. If the seat is not lifted higher than 8 cm, the seat can be tilted fully (30°).
When the seat is tilted more than 8° the seat can max be lifted 8 cm. If the seat is not tilted more than 8°, the seat can be lifted fully (30 cm)
By seat lift more than 8 cm or by seat tilt over 8° reduces chair speed automatic with 50%.

The first drives in TA Indoor Wave should be conducted where there is plenty of room around the chair and the chair's speed should be low.

While driving:
TA Indoor Wave's driving characteristics including: braking, maximum speed and acceleration can be set to suit the individual needs.
Setting the chair's driving characteristics is performed by TA Services A/S.

TA Indoor Wave is switched on by a light pressure on the Power button.

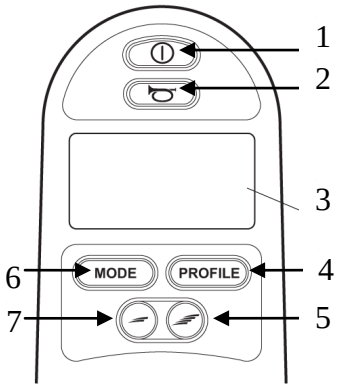
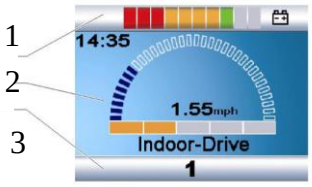
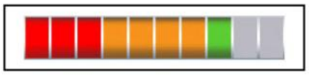
The chair's speed is increased by pressing the speed-up button.

The chair's speed is decreased by pressing the speed-down button.

WARNING!
Do not reach into or under the chair when the seat lift and seat tilt is activated because there is a risk of entrapment between the mechanical parts.

WARNING!
Be aware of others, especially children, is too close to the chair when the seat lift and seat tilt is activated.

After driving.
Always leave the chair off and put on lowest speed.
NB! Leaving the chair turned on will draw power from batteries, with reduced remaining driving distance to follow.

Control box	
	1 Power button 2 Horn 3 Display 4 Driving Profile 5 Speed up button. 6 Switching between driving and menu 7 Speed down button.
Display	
	1 - Battery indicator: 2 - Main Screen 3 - Profile indicator
	Battery indicator **All 10 bar lights** (red, yellow and green): The chair is fully charged **7 bar lights** (red and yellow): The chair must be recharged as soon as possible **3 bar lights or blinks slowly** (red): The chair must be recharged immediately in order not to destroy the batteries.
 3.0 Km/t	Speed Display Shows with graphs and numbers the current speed.
	Tortoise shows that the chair is limited. When the seat is lifted above 8 cm, the seat can be tilted max 8°. When the seat is tilted more than 8° the seat can max lift 8 cm. By seat lift more than 8 cm or by seat tilt more than 8° reduces the chair speed automatic with 50%. If the seat is not lifted higher than 8 cm, the seat can be tilted fully (30°). If the seat is not tilted more than 8°, the seat can be lifted fully (30 cm)

 Electric back	Electrical functions Pressing the "Mode" button to get into the menu from which electrical functions can be operated with a joystick. You select function by flipping the pages with the joystick, and activate the feature by taking the control stick forward or backward.
	Joystick activated If you activate the joystick before or just when you turn on, the symbol will blink. Release and center the joystick to use the chair. If the joystick is not released and centered within 5 seconds, the chair will not run, even though the joystick is released. Turn on and off the chair again to make it run.
	Driving Profile The chair can be programmed for different driving profiles. Contact TA Service A/S for further instruction and programming

WARNING!
The chair is EMC tested. However, it is possible that the wheelchair can be affected by electromagnetic fields from mobile phones for example. Similarly, it cannot be excluded that the chair can emit electromagnetic fields that can affect the surroundings, such as alarm systems in stores.

Locking Joystick

The system can be locked using the joystick, so the chair cannot drive and the system cannot be activated.

In case of lock this symbol appears in display

Locking the system:

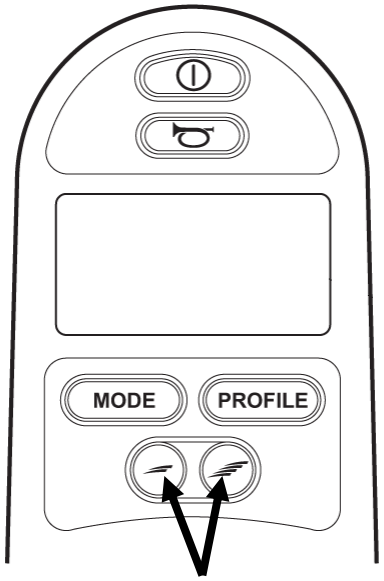
When the chair is on, press and hold the "Power" button.
1. After 1 second the chair beeps, release "On-Off"
2. Press the joystick forward until a beep appears
3. Press the joystick back until a beep appears
4. Release the joystick, there is now a long beep
5. The chair is now locked. - Symbol is shown in display

Locking up the system:

1. If the chair is off, turn on the chair
2. Press the joystick forward until a beep appears
3. Press the joystick back until a beep appears
4. Release the joystick, there is now a long beep
5. The chair is now locked up - the symbol disappears.

Setting Menu

Figur 1



In the setting menu it is possible to change the clock, brightness, backlight and color, and odometer.

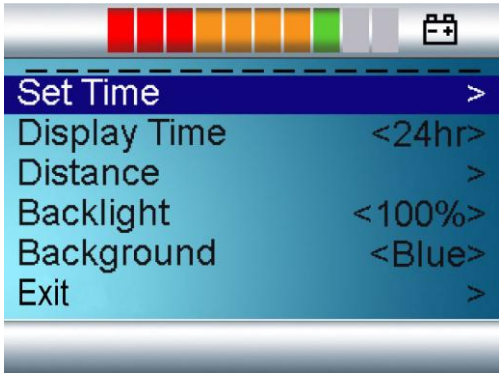
To get into the options menu you must hold **both** buttons *speed up* and *speed down* simultaneously. See arrow A - Figure 1

The following points are then displayed in the menu:

Set time:
Adjust the time. Press the control stick right to set the time. Select exit at the bottom of the menu to come back.

Display time:
Selecting time format to display.
Features: 12h, 24h, Off

Backlight:
Backlight.
Features: 0% to 100% in increments of 10%



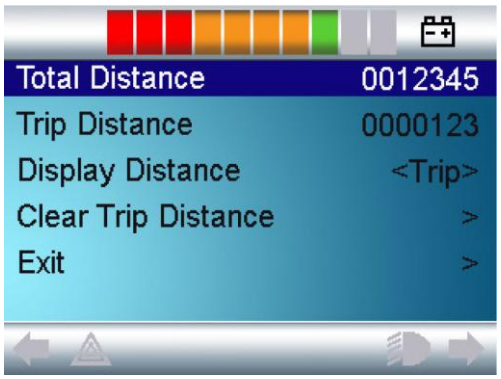
Background:
Background. Here you can choose background color .

Blue = blue light in all profiles

White = White background in all profiles -
(The display is more visible with a white background in bright sunlight)

Auto = The chair can be programmed to display different backgrounds at different profiles. Contact TA Service for special adaptation.=

Distance - following submenu appears:
Total distance: total distance power module has been running



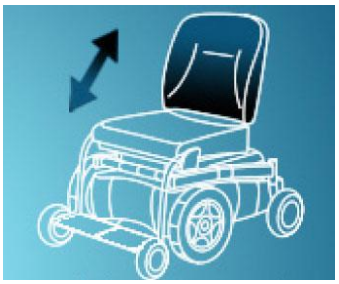
Trip distance: Trip odometer - can be reset.

Display distance: option on the trip or total to be shown in display

Clear Trip distance: Resetting the trip odometer

Exit: Exit the menu.

Setting the power functions



The wheelchair may depending on model have the following power functions:

- Seat lift
- Seat tilt
- Back
- Right legsupport
- Left legsupport

The functions are activated by pressing the "Mode" button on the control box, then there's a picture of power features. Find the function to be used by flipping the pages of the control stick. When the feature is found, activate it by taking control stick forward or backward, depending on which way the function should run.

Note:

When the seat is raised above 8 cm, the seat can tilt max 8 °. If the seat is not lifted higher than 8 cm, the seat can be tilted fully (30°). When the seat is tilted more than 8° the seat can max be lifted 8 cm. If the seat is not tilted more than 8°, the seat can be lifted fully (30 cm) By seat lift more than 8 cm or by seat tilt more than 8° reduces chair speed automatic with 50%.

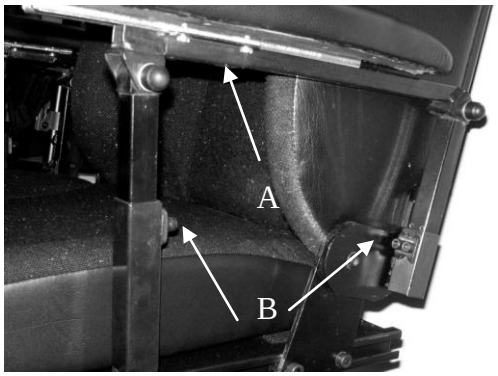
WARNING!
Do not reach into the chair when the seat lift and seat tilt is activated because there is a risk of entrapment between the mechanical parts.

WARNING!
Be aware of others, especially children, is too close to the chair when the seat lift and seat tilt is activated.

Setting the armrests.

Armrest height in distance to the seat and armrest cushion distance to the back can be adjusted.

Armrest cushion position relative to the back is adjusted by loosening four screws (A) under the armrest with a slotted screwdriver. Once the screws are loosened, armrest cushion can be pushed forward / backward and positioned to the user.
Armrest height is adjustable by loosening screws (B) on the armrest stanchion.



Setting up the legsupport.

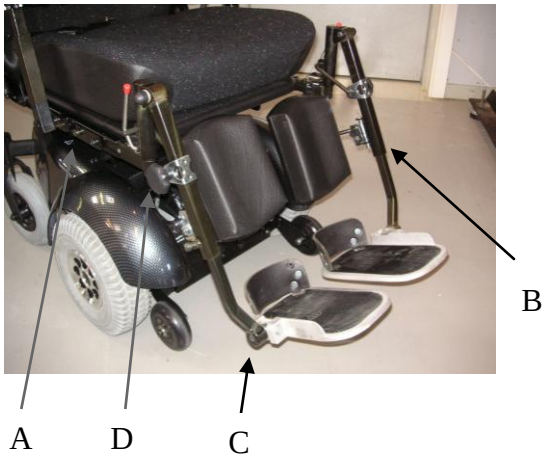
The legsupport is mounted on the chairs seat frame.

Legsupport position relative to the seat is adjusted by loosening the two hex screws (A) (6 mm) on the inside of the seat frame. The legsupports can be adjusted to fit the user's femur length.

Legsupport length or the distance between the seating surface and base plate is adjusted by loosening the hex screw (B) (6 mm) on the back of the legsupports down tube. When the footrest is in the desired distance from the seat tighten hex screw again.

Footplate angle to the floor is adjusted by loosening the hex screw (C) (6 mm) on the side of the footplate. When the footplate is in the desired angle **tighten the screw - HARD.**

Legsupport angle is adjusted by loosening the thumbscrew by hand, set the legsupports in the desired position and tighten the screw.



Installation of the lap belt.
There can be fitted lap belt on the TA Indoor Wave. TA Services A/S recommends that the lap belt is fastened either by the back mount (C) or on a bracket in the chair seats C profile.

Important when driving.

Braking.
The chair brakes by releasing the control stick, so it returns to the vertical position.
It is possible to adjust how fast the chair is slowing down and thus reduce any late run on the chair. This adjustment is carried out by TA Service A/S.
At a short late run, braking will be experienced very sharp.

WARNING!
Pay particular attention to late run when driving on ramps.
When driving on ramps let go of the control stick before you reach the ramp leading edge.

Mechanical disengaging the brakes.
The electric brake can be disengaged by the need for manual towing.
This is done by twisting the brake handles away from TA Indoor Wave logo onto the wheels

When the electric brake is released, the chair cannot be moved with the control stick. This can only be done again when the brake handles is twisted back in vertical position - away from the center, and the electric brake is engaged again.

WARNING!
When the chair's brakes are disengaged, the chair may roll if it is on a sloping surface.

Emergency brake.

The chair can emergency brake by pressing the On / Off button.

This brake method results in a very abrupt deceleration and should **only** be performed in an emergency and only if the user of the chair is prepared.

WARNING!
Slowing down by pressing the On /Off button there is a risk that the user's torso could fall over.
Ultimately, the user could fall out of the chair.
This kind of slowdown should to the fullest extent be avoided on sloping surfaces and ramps.

Force of obstacles.
TA Indoor Wave can climb obstacles up to 5 cm, making it able to run over smaller doorsteps and the like.
At very steep increases may be necessary inlet and a certain speed.
In the interest of the chair's stability by forcing different levels it is important that the seat is elevated as little as possible and is as close to an upright position as possible to minimize this risk.

WARNING!
By forcing level differences, it is important that the chair runs perpendicular to the obstacle in order to minimize the risk that the chair should tilt.

By forcing level differences with the seat tilted or hoisted there is a risk that the chair can tip over. By forcing level differences, it is therefore important that the seat is elevated as little as possible and is as close to an upright position as possible to minimize this risk.

Driving on slopes.
TA Indoor Wave can clear terrain rises up to 12°.
Driving on sloping surfaces should be carried out forward and at a slow pace.

WARNING!
Driving on slopes should be avoided because a slope to the site will give a risk that the chair can tip over.
When driving on slopes, seat should not be lifted to keep the chair's stability.

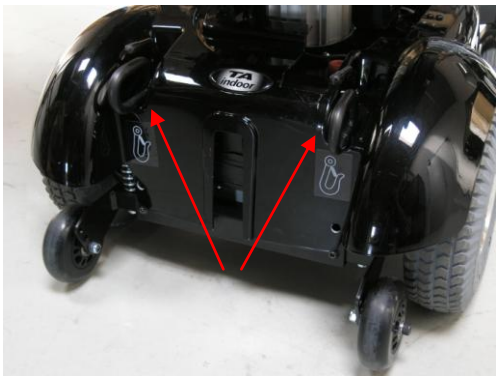
Transportation by car.

TA Indoor Wave is crash tested with 4-point car tiedown (accessories) and Dahl Docking System (accessories), so it can be used as a seat in the car, bus or similar.
The user can use the TA Indoor Wave during transport by car, bus or similar, if the TA Indoor Wave is equipped with TA 4-point car tiedown and/or Dahl Docking system.

The seat and lift must always be in the lowest position when transported by car.

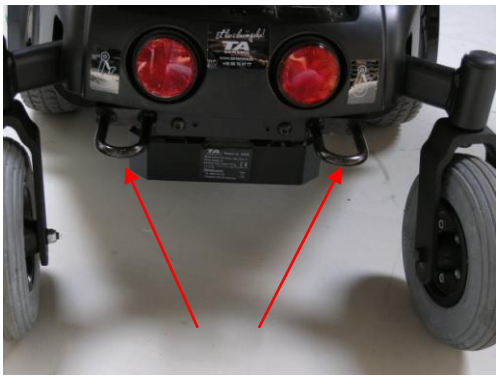
If a belt is mounted on the wheelchair, it will not replace the cars seat belt.
The cars seat belt must always be used.

4-point car tiedown.



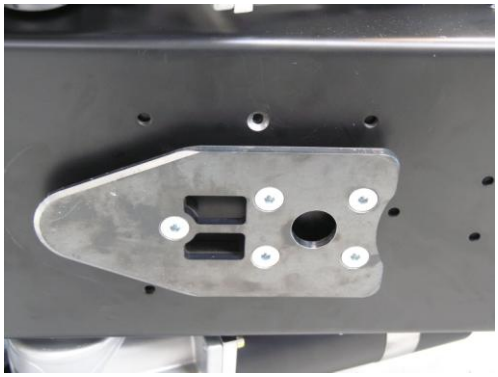
4 attachment eyes are mounted on the wheelchair, which can
be used together with an approved
4-point car tiedown system.

These eyes are marked with a hook symbol (se red arrows on the pictures.



Contact TA Service for more information.

Dahl Docking System



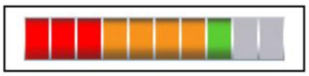
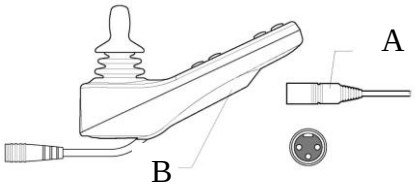
If Dahl Docking System should be used, a plate is mounted in the bottom of the wheelchair which will lock into the docking system.

Contact TA Service for more information.

Charging.

TA Indoor Wave is equipped with a battery level indicator at the top of the control box - the long series of LEDs.

As the chair is used the battery level falls and the LEDs turn off. See the following explanation:

	Battery indicator: **All 10 bar lights** (Red, yellow and green): The chair is fully charged **7 bar lights** (red and yellow): The chair must be recharged as soon as possible **3 bar lights** or blinks slowly (red): The chair must be charged up immediately so not to destroy the batteries.
	The charging plug from the charger (A) is connected to TA Indoor Wave in the front of the control box in the charger socket (B)
	The battery charger is switched on; **BOTH** the 0/1 switch on the charger **AND** on the power point on the wall

TA Indoor Wave should be turned off when batteries are charging.

RECOMMENDATION!
It's a good idea to put the chair for charging when not in use, this will make sure that the batteries are always fully charged. When charging is finished the charger automatically turns off. There is thus no risk that the charger is connected to a charged battery

RECOMMENDATION!
TA Services A/S recommends that batteries be recycled.

WARNING!
Avoid touching leaky batteries, as the contents can be harmful.

Fuses.

Under the back shield in the left side is an overload protection (Fig. 1).
Fuse cuts power if the wheelchairs maximum consumption exceeds 50A

The fuse is a circuit breaker that switches off at overload. To reconnected the fuse button is pressed which sits inside the shield (arrow A)

Figure 1

Cleaning.

TA Indoor Waves shield can be cleaned with a cloth dampened in household detergent.
Do not use solvents on the shield.

WARNING!
TA Indoor Wave or parts of it will not withstand immersion in water.
Please note that all electrical components do not tolerate water.
TA Indoor Wave cannot be washed with pressure washer.

Warranty.

There is 2 year warranty on TA Indoor Wave. Valid from date of purchase. Any warranty repairs will be performed free of charge with regard to working hours and spare parts. The warranty period on batteries and tires supplied by TA. Service A/S is 1 year from purchase date.

Warranty repairs must be performed by TA Service A/S.

The warranty is voided if the used battery charger is not approved by the TA Service A/S, or if the batteries are run down.

If there is doubt about whether a particular battery charger can be used contact TA Services A/S.

Troubleshooting.

Problem:	Cause:	Solution:
The chair cannot run	1. Charging connector is connected to the control box.	Remove the charging plug.
	2. Motor brake is disengaged.	Connect the motor brakes.
	3. Other cause.	Contact authorized service center.
The chair drives slowly. Symbol appears in display	1. Speed Lower transferee is activated because of lifted and/or tilted seat.	Lower the seat and /or tilt the seat back to nearly horizontal.
	2. Other cause.	Contact authorized service center.
Symbol appears in display	1. The system has reduced power to the engines to prevent overheating.	Stop running and let the engines cool. The engines were overloaded and exposed to more load than they are intended for.
	2. Other cause	Contact authorized service center.
Symbol appears in display	1. Control system was too hot and has reduced the impact.	Turn of the chair and let it cool off.
	2. Other cause	Contact authorized service center.
Symbol appears in display	1. The system has generated an error and displays a text, module and an error code.	Contact authorized service center.
Symbol appears in display	1. Joystick activated If you activate the joystick before or just when you turn on, the symbol will blink.	Release and center joystick to use the chair. If the joystick is not released and centered within 5 seconds, the chair will not run, even though the joystick is released. Power cycle the chair again to use the chair.
	1. joystick is locked	See "lockdown joysticks" to lock the joystick up.
CHARGER:	See enclosed instructions for charger	

WARNING!
Repairs must be performed by TA Service A/S or repairer who is authorized by TA Service A/S
Only original parts or parts that are approved by TA Service A/S can be used.

Declaration of Conformity

CE

Manufacturer:	TA. Service A/S Ømarksgården Orupgade 32 B DK – 4640 Faxe E-mail: ta-service@ta-service.dk
Product:	TA Indoor Wave elektric wheelchair
ISO klassifikation:	ISO 12 21 27
Art.nr.:	95162

The above aid is hereby declared to be designed and constructed in accordance with the essential requirements of Council Directive 93/42/EEC of 14 June 1993. See the Interior and Health Ministry Order No. 409 on medical equipment of 27 May 2003.

TA Indoor Wave is tested by Hjälpmedelinstitutet in Stockholm, and complies with standard EN 12184:2002.
TA Indoor Wave is EMC tested at Delta in Them in accordance with EN 12184:2009 and ISO 7176-21:2003.
TA Indoor Wave is Climate tested at Delta in Hørsholm according to ISO 7176-09.

TA Indoor Wave is Crash tested by Dahl Engineering according to ISO 10542-5 &7176-19 - 2008

Faxe 2011

Torben Andersen

Managing Director